

*State of Alaska
Epidemiology*



Bulletin

*Recommendations
and
Reports*

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Foodborne Outbreaks in Alaska 2000-2003

Background

Every year, outbreaks of foodborne illness cause significant morbidity and mortality, numerous days of work lost, and closures of restaurants, delis, and other food vendors. The Centers for Disease Control and Prevention (CDC) estimates that foodborne diseases cause 76 million illnesses, 325,000 hospitalizations and 5,200 deaths in the United States each year. Although the total costs of foodborne illnesses are unknown, CDC estimates that costs for medical care and lost wages for salmonella, just one of the 250 known foodborne pathogens, are more than \$1 billion/year.¹

Investigations

Between 2000-2003, Alaska Department of Health and Social Services (AKDHSS) investigated 26 outbreaks of foodborne illness caused by at least 10 different enteric organisms that affected at least 500 people (Table). In addition to these larger outbreaks, we investigated eight cases of botulism, four cases of paralytic shellfish poisoning, and three cases of trichinosis. From 2000 through 2003, foodborne outbreaks were documented in five of six regions of Alaska, from large urban centers to small villages. The causative organism was identified in 19 (73%) of these 26 outbreaks; this surpasses the nationwide average (32%) of identification of the organism.²

Six restaurant outbreaks were identified during this time period. Restaurant outbreaks often involve large groups of people and may continue beyond one meal unless the cause is identified and corrected. Restaurant outbreaks lead to lost revenue and sometimes result in permanent restaurant closure. Employee turnover in restaurants necessitates frequent food safety training; all restaurants should have a training plan in place. Handwashing and proper food handling and storage are the major ways to prevent many foodborne outbreaks.

Laboratory Support

The Alaska State Public Health Lab (ASPHL) has recently added testing of stool specimens for botulism and norovirus. This improved capacity for in-state testing will lead to decreased

turnaround time for identification of suspected foodborne organisms. Testing of specimens in conjunction with outbreak investigations is free-of-charge. Collection of appropriate and timely stool specimens, critical to an investigation, is outlined in an excellent primer on foodborne illness.³ An initial differential diagnosis is critical to determine in consultation with the laboratory the agent(s) that the lab will attempt to detect. Suspect foods, based on the epidemiological investigation, should be preserved until an agent has been isolated from human stool or vomitus specimens. Suspect foods will then be tested by the public health lab for the causative agent.

Reporting

Rapid reporting of suspected foodborne illness may allow early identification of the source food and offending organism, leading to the establishment of effective control measures, prevention of additional illness, and cessation of the outbreak. Sanitarians from the Department of Environmental Conservation (DEC) perform restaurant inspections, food embargoes, and any needed commercial food source trace backs during an outbreak. After a recent outbreak of *Salmonella saintpaul* linked to alfalfa sprouts in several northwestern states, DEC sanitarians recalled sprouts that had been distributed in Alaska by the same grower.

Recommendations

1. All suspected cases or clusters of foodborne illness should be immediately reported to the Section of Epidemiology at 907-269-8000 or 1-800-478-0084.
2. Providers should obtain bulk stool for viral isolation and enteric cultures in Cary-Blair media on ill people in the ER or office to speed identification of the organism. Specific specimen collection requirements are available from ASPHL at 907-334-2100 during working hours or from Section of Epidemiology at 1-800-478-0084 after hours.
3. Restaurants should contact Department of Environmental Conservation (907-269-7501) to obtain materials on employee food safety training.

Selected Foodborne Outbreaks in Alaska, 2000-2003

Month/Yr	Event	Agent	# Attend	# Ill	Implicated Food	Deficiency
Jan 2000	Homes, Anchorage/Nationwide	<i>Shigella sonnei</i>		2 in AK	Commercial bean dip	Contaminated at source
Feb 2000	Home, Port Lions	Paralytic Shellfish Poisoning	1	1	Butterclams	Toxin in food
May 2000	Cruise Ship, Whittier	Norovirus	31	20	Unknown	Unknown
Jun 2000	Home, Sitka	Paralytic Shellfish Poisoning	1	1	Littleneck clams	Toxin in food
Jul 2000	Restaurant, Kenai Peninsula	<i>Escherichia coli</i> O157:H7		58	Ground beef	Inappropriate food handling
Aug 2000	Restaurant, Ketchikan	Unknown		25	Unknown	Multiple food handling deficiencies
Aug 2000	Home, Anchorage	Trichinosis	3	1	Bear meat	Inadequate cooking
Sep 2000	Hunting party, Bethel	Trichinosis		4	Bear meat	Inadequate cooking
Dec 2000	Caterer, Anchorage	Norovirus	19	9	Mixed fruit	Ill food handler
Dec 2000	Caterer, Anchorage	Norovirus	13	7	Turkey	Ill food handler
Dec 2000	Restaurant, Homer	Hepatitis A	275	7	Crab legs	Ill party participant?
Jan 2001	Home, Manokotak	Botulism	11	3	Fermented beaver tail	Toxin in food
Jan 2001	Home, Kodiak	Paralytic Shellfish Poisoning	1	1	Butterclams	Toxin in food
Mar 2001	Church caterer, Anchorage	Staph toxin?		92	Potato salad	Ill food handler
May 2001	Home, Juneau	Paralytic Shellfish Poisoning	2	1	Butterclams	Toxin in food
Jul 2001	Home, Napakiak	Botulism	2	2	Whitefish	Toxin in food
Aug 2001	Home, Kipnuk	Botulism	3	1	Unknown	Toxin in food
Aug 2001	Home, Anchorage	Botulism	2	2	Fermented fish eggs	Toxin in food
Sep 2001	Home, Akiak	Botulism	1	1	Seal oil	Toxin in food
Sep 2001	Home, Eagle	Trichinosis	1	1	Bear	Inadequate cooking
Dec 2001	Home, Nunapitchuk	Botulism	1	1	Seal oil	Toxin in food
Jan 2002	Pipeline camp, Haul Road	Unknown	70	9	Red salsa, cheese	Unknown
Jan 2002	Restaurant, Juneau	<i>Salmonella typhimurium</i>		7	Bread pudding ?	Food contamination
Feb 2002	Children's Playplace, Anchorage	Norovirus	21	16	Cake and ice cream	Food contamination
Feb 2002	Hotel, Anchorage	Norovirus	26	22	Spinach wrap, cookies	Food contamination
Apr 2002	Home, Chevak	Trichinosis	8	1	Walrus meat	Inadequate cooking
Jul 2002	Home, Ft. Wainwright	Trichinosis	1	1	Bear meat	Inadequate cooking
Apr 2002	Home, Skwentna	Trichinosis		5	Bear meat barbeque	Inadequate cooking
May 2002	Preschool, Anchorage	Unknown		21	Unknown	Unknown
Jul 2002	Home, Ketchikan	Botulism	2	2	Fermented fish eggs	Toxin in food
Jul 2002	Home, Kwigillingok	Botulism	14	8	Beached whale muktuk	Toxin in food
Aug 2002	Home, Kongignak	Botulism	2	1	Fermented fish heads	Toxin in food
Sep 2002	Home, Juneau	Paralytic Shellfish Poisoning	7	7	Mussels	Toxin in food
Sep 2002	Home, Napakiak	Botulism	3	3	Duck soup	Toxin in food
Oct 2002	Community, Elim	<i>Salmonella heidelberg</i>		31	Apple pie, salmon	Food contamination
Dec 2002	Restaurant, Fairbanks	<i>Yersinia enterocolitica</i>		5	Unspecified ethnic style	Food contamination
Mar 2003	Homes, Anchorage/NW States	<i>Salmonella enteritidis</i>		19	Eggs	Contaminated at source
Mar 2003	Home, Napakiak	Botulism	1	1	Seal blubber	Toxin in food
Jun 2003	Home, Scammon Bay	Botulism	1	1	Fermented fish heads	Toxin in food
Jul 2003	Restaurant, Craig	Grease		26	Grease	Grease breakdown products
Jul 2003	Home, Akiachak	Botulism	1	1	Fermented fish	Toxin in food
Nov 2003	School, Kodiak	<i>Salmonella typhimurium</i>	90	50	Taco Meat	Temperature abuse
Nov 2003	Home, Kongignak	Botulism	1	1	Tomcod/seal oil	Toxin in food

References

1. <http://www.cdc.gov/ncidod/diseases/food/index.htm>
2. Surveillance for Foodborne Disease Outbreaks—1993-1997. *MMWR* March 17, 2000/49(SS01); 1-51.
3. Diagnosis and Management of Foodborne Illness: A Primer for Physicians. *MMWR* January 26, 2001/50(RR02);1-69.

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